

REMARKS

In the Office Action, claims 1 and 6-8 were rejected under 35 U.S.C. §102(b) based on U.S. Patent No. 4,979,190 to Sager et al. (hereinafter “Sager”). Claims 2-5 and 9-12 were found to be allowable over the prior art. Applicants respectfully traverse all objections and rejections. As set forth below, Sager fails to disclose a second latch of a data receiving unit that is clocked on the transitions of a delayed replica of a forwarded clock signal that are **alternate** to the transitions on which an input latch is clocked.

Claim 1, in relevant part, recites:

“A data receiving unit for receiving data transmissions in which data is transmitted in parallel over a plurality of conductors and a forwarded clock signal, synchronized with the data, is received over a further conductor, said unit comprising:

“an input latch connected to receive the data . . .

“means for maintaining a delayed replica of said forwarded clock signal in synchronism with said forwarded clock signal, **said delayed replica being a local clock signal for internal operations of said receiving unit,**

“a second latch connected to receive the contents of said input latch, **said second latch being clocked by said local clock signal on transitions alternate to those on which said input latch is clocked.”**

As shown, claim 1 recites a data receiving unit that maintains a delayed replica of a forwarded clock signal in synchronism with the forwarded clock signal, and uses this delayed replica as a local clock signal for internal operations of the receiving unit, including to drive a second latch of the receiving unit. The second latch, moreover, is clocked on transitions of this delayed replica of the forwarded clock signal that are alternate to the transitions on which the input latch is clocked.

Applicants agree that Sager discloses a data receiving unit (70) having an input latch (63) whose output (Q7) is connected [through a multiplexer (66)] to a second latch (67). Sager's second latch (67), however, is not clocked by a delayed replica of a forwarded clock signal, as recited in claim 1. Instead, as clearly shown in Fig. 4 of Sager, the second latch (67) is clocked by a local clock signal 78 that is entirely independent of, and bears no relation to, the forwarded clock signal (74) received at Sager's data receiving unit (70). This is confirmed by Sager at Col. 8, line 67 to Col. 9, line 1 where he states: "This data then passes through latch 67 [i.e., through the second latch], **under the control of CLOCK BH 78, which is high.**" Furthermore, as shown at the bottom of Sager's Fig. 4, and as confirmed at Col. 8, line 63 to Col. 9, line 2, Sager's CLOCK BH 78 does not correspond to the forwarded clock signal, which Sager identifies as RF CLOCK 74. Instead, Sager's CLOCK BH 78 corresponds to a common, local clock signal 52, which Sager uses to run both the transmitting and receiving units (60 and 70). Indeed, Sager provides no connection between the forwarded clock signal RF CLOCK 74 captured at receiving unit 70 and second latch 67.

The Office Action at p. 3 relies on Sager's inverter (79) as purportedly disclosing Applicants' claimed alternate transitions of the delayed replica of the forwarded clock signal. Sager's inverter (79), however, does not drive the second latch (67). Instead, the output from Sager's inverter (79) is used only to operate another input latch (63). As clearly shown in Fig. 4, there is no connection between Sager's inverter (79) and the second latch (67).

It is improper, moreover, for the Office Action to equate Sager's other input latch (63) with Applicants' claimed second latch. Specifically, claim 1 recites that the second latch is "connected to receive the contents of said input latch", whereas Sager's other input latch (63) cannot receive the contents of the first input latch (62) because there is **no** connection between the two. Because Sager fails to disclose a second latch clocked by transitions of a delayed replica of a forwarded clock signal that are alternate to the transitions used to clock an input latch, the rejection of claim 1 based on Sager should be withdrawn.

Claim 6 depends from claim 1, and thus it too is in condition for allowance.

Independent claim 7, like claim 1, recites among other things a second latch being clocked on the transitions of a delayed replica of a forwarded clock that are alternate to the transitions used to clock the input latch. Thus, claim 7 is distinguishable over Sager for the same reasons as described above in connection with claim 1. Claim 8, moreover, depends from claim 7, and thus is in condition for allowance.

PATENTS  
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Applicants submit that the application is in condition for allowance and early favorable action is requested.

Respectfully submitted,



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